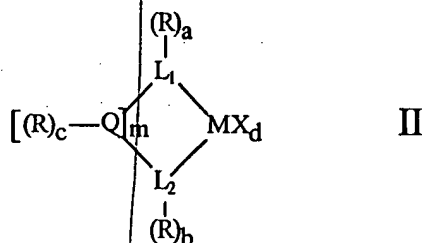


comprising a cocatalyst and a catalyst component, wherein the catalyst component is supported on a porous inorganic solid, wherein the catalyst component is {characterized in that is} defined by {general formulas} formula I or II



wherein:

R{,} groups are equal to or different from each other; {,} R is hydrogen or a radical {which contains} containing from 1 to 20 carbon atoms; {this group} R optionally contains {heteroatoms} a heteroatom selected from the group consisting of elements from groups 14 {to} through 16 of the periodic table of the elements and boron; at least one {group} R group contains {a group} an OSiR"₃ group, wherein R" is selected from the group {comprising} consisting of: linear or branched C₁-C₂₀ alkyl, C₃-C₂₀ cycloalkyl, C₆-C₂₀ aryl, C₇-C₂₀ alkenyl, C₇-C₂₀ arylalkyl, C₇-C₂₀ arylalkenyl, {or} and C₇-C₂₀ alkylaryl, linear or branched};

Q is selected from {a group comprising} the group consisting of: boron {or an element} and elements from groups 14 {or} and 16 of the periodic table{,}; when m > 1, {groups} Q groups are equal to or different from each other; {the} free valences of every Q are filled with {groups} the R group or groups according to {the} a value of c {index}; two {groups} R groups optionally are united to form a ring having from 5 to 8 atoms; m {value range} ranges from 1 to 4;

L{,} groups are equal to or different from each other{,}; L

is a cyclic organic group united to M through a π bond, L {it} contains a cyclopentadienyl ring{,} that optionally is fused with one or more other rings, or {it} L is an atom selected from the group consisting of elements from groups 15 {or} and 16 of the periodic table;

L₁ and L₂{,} are equal to or different from each other{,}; L₁ and L₂ have the same meaning {of} as L;

M is a metal selected from the group consisting of: elements from groups 3, 4, and 10 of the periodic table, {lanthanide or actinide} lanthanides, and actinides;{.}

X{,} groups are equal to or different from each other{,}; X is selected from {a} the group {comprising} consisting of: halogen, hydrogen, OR'', N(R'')₂, C₁-C₂₀ alkyl, and {or} C₆-C₂₀ aryl; wherein R'' is selected from the group {comprising} consisting of: linear or branched C₁-C₂₀ alkyl, C₃-C₂₀ cycloalkyl, C₆-C₂₀ aryl, C₇-C₂₀ alkenyl, C₇-C₂₀ arylalkyl, C₇-C₂₀ arylalkenyl, and {or} C₇-C₂₀ alkylaryl{, linear or branched};

x is 1 or 2, y is 2 or 3 in such a way that x + y = 4;

d is an integer ranging {ranges} from 0 to 2; and a, b and c are integers from 0 to 10{,} in such a way that a + b + c ≥ 1.

2. (amended once) A catalyst {Catalyst component} according to claim 1 wherein in formula I or II {characterized in that} R is selected from the group {comprising} consisting of: hydrogen, SiR'₃, linear or branched C₁-C₂₀ alkyl, C₃-C₂₀ cycloalkyl, C₆-C₂₀ aryl, C₇-C₂₀ alkenyl, C₇-C₂₀ arylalkyl, C₇-C₂₀ arylalkenyl, and {or} C₇-C₂₀ alkylaryl, {linear or branched or a group SiR'₃} wherein R' is selected from the group consisting of: OSiR''₃, linear or branched C₁-C₂₀ alkyl, C₃-C₂₀ cycloalkyl, C₆-C₂₀ aryl, C₇-C₂₀ alkenyl, C₇-C₂₀ arylalkyl, C₇-C₂₀ arylalkenyl, and {or} C₇-C₂₀ alkylaryl{,

linear or branched or OSiR''_3 at least one {group} R group contains {a group} an OSiR''_3 group, wherein R'' is selected from the group {comprising} consisting of: linear or branched $\text{C}_1\text{-C}_{20}$ alkyl, $\text{C}_3\text{-C}_{20}$ cycloalkyl, $\text{C}_6\text{-C}_{20}$ aryl, $\text{C}_7\text{-C}_{20}$ alkenyl, $\text{C}_7\text{-C}_{20}$ arylalkyl, $\text{C}_7\text{-C}_{20}$ arylalkenyl, and {or} $\text{C}_7\text{-C}_{20}$ alkylaryl{, linear or branched}; and optionally all {these} the R groups contain a heteroatoms selected from the group consisting of: elements of groups 14 {to} through 16 of the periodic table of the elements and boron.

a' 3. (amended twice) A catalyst {Catalyst component} according to claim 1 wherein in formula I or II {characterized in that} M is selected from the group {comprising} consisting of: Ti, Zr, and {or} Hf.

4. (amended twice) A catalyst {Catalyst component} according to claim 1 wherein in formula I or II {characterized in that} the {group} R group containing the group OSiR'' is selected from the group {comprising} consisting of: $-\text{CH}_2\text{-CH}_2\text{-OSiMe}_3$, $-\text{CH}_2\text{-CH}_2\text{-CH}_2\text{-OSiMe}_3$, $-\text{CH}_2\text{-O-CH}_2\text{-OSiMe}_3$, $-\text{O-CH}_2\text{-CH}_2\text{-OSiMe}_3$, and $-\text{SiMe}_2\text{-CH}_2\text{-CH}_2\text{-OSiMe}_3$.

5. (amended twice) A catalyst {Catalyst component} according to claim 1 wherein in {characterized in that in the general} formula I{,} L is cyclopentadienyl or indenyl; M is zirconium; x is 2; y is 2; R is $\text{C}_1\text{-C}_4$ alkyl, wherein at least one hydrogen of one R is substituted with OSiR''_3 wherein R'' is selected from the group {comprising} consisting of: Me, Et, and Pr.

6. (amended twice) A catalyst {Catalyst component} according to claim 1 wherein {characterized in that} in {the general} formula II, M is zirconium; L_1 and L_2 are cyclopentadienyl or indenyl

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{group}; R is hydrogen, a C₁-C₄ alkyl wherein at least one hydrogen of one R is substituted with OSiR''₃ or a SiR'₂-OSiR''₃ group, wherein R'' is selected from the group {comprising} consisting of: methyl, ethyl, propyl; [(R)_cQ]_m is H₂C-CH₂, CRH-CH₂, RHC-SiR'₂, R₂C-SiR'₂, and {or} SiRR'.

7. (amended twice) A catalyst {Catalyst component} according to claim 1 wherein {characterized in that} in {the general} formula II, M is titanium; L₂ is an oxygen or a nitrogen atom; L₁ is a cyclopentadienyl, indenyl or fluorenyl ring; [(R)_cQ]_m is H₂C-CH₂, CRH-CH₂, RHC-SiR'₂, R₂C-SiR'₂, or SiRR'.

9. (amended once) A catalyst {Solid catalyst component} according to claim 1 wherein {characterized in that} the porous inorganic solid is selected from the group {comprising} consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

a²

10. (amended twice) A process for preparing {Process for the preparation of} a polymerization catalyst according to claim 1 {solid catalyst component} comprising the following steps:

- (a) impregnation, under anhydrous conditions and an inert atmosphere, of a solution of at least one catalyst component defined by formula I or II {catalyst component according to claims 1,} on {the supporting material} on a support at a temperature between -20°C and 90°C;
- (b) filtration and washing with a solvent{,} selected from the group consisting of aliphatic hydrocarbons and {or} aromatic {hydrocarbon} hydrocarbons.

11. (amended twice) A process for preparing {Process for the preparation of} a polymerization catalyst according to claim 1 {a

solid catalyst component} comprising the following steps:

- A2
- (a) depositing at least one catalyst component defined by formula I or II {the catalyst component according to claim 1} on {the} a support{,} by using a solution of the {compound} catalyst component to heterogenize;
 - (b) eliminating {the} solvent through evaporation to yield a solid residue;
 - (c) warming the solid residue up to temperature between 25 and 150°C.

12. (amended twice) A process as claimed in Claim 10, wherein {Process for the preparation of a solid catalyst component according to claim 10 characterized in that} before step (a) the catalyst component is mixed with a cocatalyst.

A3 ~~Sub 217~~

14. (amended twice) A {Polymerization} catalyst according to claim 1 wherein {13, characterized in that} the cocatalyst is selected from {a} the group {comprising} consisting of: alkylaluminum, boron { {compound} compounds, {or} and mixtures {mixture} thereof.

Please add the following new claims.

A4 ~~Sub 217~~

19. A process as claimed in Claim 11, wherein before step (a) the catalyst component is mixed with a cocatalyst.

20. A catalyst as claimed in Claim 1, wherein the catalyst is for the polymerization of alpha-olefins in solution, in suspension, in gas phase at low and high pressure and temperature or in mass at high pressures and high or low temperatures; and wherein the catalyst component is a metallocene complex.

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21. A catalyst according to claim 2, wherein in formula I or II M is selected from the group consisting of: Ti, Zr, and Hf.

22. A catalyst according to claim 3, wherein in formula I or II M is selected from the group consisting of: Ti, Zr, and Hf.

ay
cont'd
23. A catalyst according to claim 2, wherein the porous inorganic solid is selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

24. A catalyst according to claim 4, wherein the porous inorganic solid is selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

25. A catalyst according to claim 5, wherein the porous inorganic solid is selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

26. A catalyst according to claim 6, wherein the porous inorganic solid is selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

REMARKS

This response is being submitted within one month after the shortened one-month statutory period set for responding to the Office Action mailed on April 26, 1999. Therefore, a petition and fee for a one-month extension are enclosed herewith.

This response cancels Claims 8, 13, and 15-18; amends Claims 1-7,